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ABSTRACT

Academic library members of the Southeastern Library Network (SOLINET) responded to a computer library network effectiveness questionnaire to determine the extent to which actual network performance, as perceived by users, is consistent with expected performance. The study evaluated the technological system in terms of outputs and implications fcr library directors and network administration, and designed an effectiveness assessment instrument. The questionnaire to assess expected and actual performance was adapted from the situational effectiveness inventory of the Monitoring Effectiveness Consistency Awareness Program (MECAP). Fifty-seven of 104 library questionnaires were used in data analysis. No statistically significant differences between perceived performance and expected performance were found in the areas of cataloging, location of books outside the library, obtaining bibliographic reference information, and lowered library expenditures. A one-way analysis of variance showed a statistical difference between actual and expected performance of general network operations. The study recommended that data be collected on network performance by member libraries and disseminated to other member libraries and potential members. It was also noted that parallel studies of other networks would add to the available network data. The validation instrument, questionnaire, and bibliography are appended. (KP)

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THE EFFECTIVENESS OF A COMPUTERIZED LIBRARY NETWORK IN MEETING THE PERFORMANCE EXPECTATIONS OF THE MEMBERS IN THE ADMINISTRATION OF ACADEMIC LIBRARIES

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS

Introduction. The development of computerized library networks is changing the administration of the academic library.

During 1976, The Kellogg Foundation offered grants of eight thousand dollars per grant to seventy-eight colleges in the southeastern United States. The grants were intended for the specific purpose of assisting the respective college in gaining membership in a regional computerized library network. Thirty-six colleges accepted the grant and twenty-seven applied to SOLINET (Southeastern Library Network, Inc.) for membership (SOLINEWS, 1977 no.1).

The implementation of network membership promises change, but the exact nature and extent of that change is difficult to gauge. The expectations of a specific library are likely to be based on the limited information available relating to network operations, needs of local library patrons, knowledge of local library needs that will hopefully be met, personnel considerations at the local level, financial considerations, etc. It may be very difficult to predict the extent to which network membership will fulfill the

expectations of a prospective member library, but, hopefully, some helpful information can be derived from gauging the extent to which the network membership is meeting the expectations of present network members.

The development of educational administration has been such that the present emphasis on "effectiveness" has produced an instrument (to be described later) that was modified for the purpose of gauging the effectiveness of network membership in meeting the expectations of academic libraries.

Statement of the problem. This dissertation is designed to study the extent to which the actual performance, as perceived by users, of computerized library network operations are consistent with the performance expected by the respective academic member libraries. Specifically, the study attempted to:

1. Evaluate the technological system, as it now exists, in terms of the outputs of the system and their implications for library directors.

2. Evaluate the technological system, as it now exists, in terms of the outputs of the system and their implications for network administrators.

3. Design and develop an instrument (or method) that can be used for the evaluation of similar networks.

The study was based upon the 104 academic (college and university) libraries included in the membership list printed in the SOLINET: Annual Report, 1974-1975. The "position effectiveness" portion of the MECAP instrument was redesigned specifically for this purpose. This was used to determine the extent to which actual performances of the network operations are the same as the expected performances. The use of the 1974-1975 list is intentional in that the time element in the development of SOLINET is such that this list provides a satisfactory number of members who have had the maximum number of years experience with the network. SOLINET began delivery of service in 1975.

SOLINET (Southeastern Library Network, Inc.) is a non-profit corporation with member libraries located in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. It uses computer terminals and special telephone lines for direct access to a data bank containing titles and complete bibliographic information at the Ohio College Library Center (OCLC). SOLINET is located in Atlanta, Georgia, and OCLC in Columbus, Ohio (SOLINET, 1975).

OCLC (Ohio College Library Center) began operation in 1967. Its purpose was to increase the availability of academic library resources and to slow the rate of the rise of

library costs for libraries in Ohio. It expanded to include 670 libraries and 1,079 computer terminals throughout the nation (as of mid-March 1976). The OCLC data base includes the Library of Congress bibliographic data--as supplied by LC's MARC tapes. One million new records are added yearly to the base, ten million items are cataloged for member libraries, and sixty million cards are printed (Plotnik, 1976).

The computerized library operations offered by SOLINET attempt to serve users by:

1. "Cataloging books quickly and efficiently . . .
2. "Locating books easily in other libraries . . .
3. "Obtaining fast, accurate information for uncertain references . . .
4. "Lowering the rate at which library expenses are increasing. After the initial start-up charges, a library of ten thousand acquisitions annually may show appreciable reductions" (SOLINET, n.d.).

The expectations of member libraries will be examined in relation to actual performance in accomplishing the stated goals.

Purpose and importance of the study. The purpose of this study is to compare actual performance of the network's computerized library operations to the performance expected by the network's respective member libraries.

There have been limited studies done that have investigated the "performance" of the computerized library operations, but none of these have attempted to systematically relate the performance to the expectations of the library personnel. The development of educational administration has produced the instrument (MECAP) that made this investigation possible.

SOLINET was chosen for the study because the investigator is the director of a library that is a member of SOLINET.

Academic libraries were chosen for the investigation because the SOLINET membership list is very predominantly academic and this is the area of interest of the investigator.

The findings should be relevant for SOLINET members and prospective members in that they will have an indication of the levels of effectiveness experienced by libraries who have been members of SOLINET since the beginning of operations in 1975. SOLINET and other regional networks may wish to use the levels of effectiveness indicated to guide in the development of user services.

Implications for administration. Administrators have to make decisions based on technological developments within the library. If the services promised by SOLINET, and expected by libraries who become members of SOLINET, are realized; there

will be administrative implications for technical processes operations, personnel, and services.

Implications for the adminstrators of the technical processes operations, if the system works, include: (1) bibliographic information needed for the cataloging and classification of books should be secured faster, (2) the printed cards should be ready for filing in the card catalog faster, (3) the number of operational steps (tasks to be performed) should be reduced, (4) there should be a lower number of books requiring local cataloging and classification because of the access to the extensive records in the OCLC data base, (5) new books arriving at the library should get to the shelves ready for circulation in a shorter period of time, and (6) the over-all efficiency of the technical processes department should be increased (at least in those libraries adding 10,000 volumes or more to their collection annually) because of lower costs for increased services.

Personnel implications include: (1) lower number of professional librarians needed for performing manual tasks (i.e. cataloging and classifying books) because of paraprofessionals using computer facilities to do tasks formerly done by the professionals, (2) morale should be increased due to the feelings of accomplishment derived from the quick and efficient processing of work loads, and (3) assignment of personnel should be enhanced through the release of

professional librarians from manual tasks making them available for service (to library users) related tasks.

Libraries exist for the purpose of providing services. Ultimately, these services should be improved through: (1) increased circulation because of more books (from savings realized) reaching the shelves faster, (2) more reference questions being answered, (3) an increase in the number of interlibrary loans, and (4) the availability of books that are more current due to shortened processing time.

Objectives. This study is designed to study the "position effectiveness" of computerized library network operations in the administration of academic libraries in the southeastern United States.

The "position effectiveness" concept is taken from MECAP (Monitoring Effectiveness Consistency Awareness Program: See MEP section of Chapter II.). This part of the study involved an attempt to graphically and numerically portray the relationship between the "expected" performance of the computerized operations and the actual performance.

The "situational effectiveness inventory" portion of MECAP was redesigned and mailed to each of the 104 libraries included in this study. Each library was sent two copies of the revised inventory, one for the library to use in indicating

"expected" performance and one to use in indicating "actual" performance.

In addition, the data produced numerically by the inventories was used to determine the mathematically significant relationship by using a one-way analysis of variance formula.

Definition of terms. The definitions include terms related to administrative theory and to library networks. Some of the terms have various possible definitions. The definitions given relate specifically to the respective terms as they are used in this dissertation.

Academic library. This term, as used in this study, includes colleges and universities, and a very limited number of libraries serving specialized schools operating academically on the college/university level.

Administration. Accomplishing organizational goals through people (Shapiro, 1976).

Computerized library operations. Includes all work presently accomplished through the use of computer terminals in the library inventoried.

Cost-Effective. Savings realized through the use of the computerized network are enough to equal or exceed the costs expended to secure the network services.

Data bank. The OCLC computer store containing the base collection of bibliographic information, cataloging characteristics of the respective library, and other record keeping information.

Data base. See Data bank.

Effectiveness. Attaining the desired outcomes (Bobbitt, 1974). Specifically, this study is concerned with the "effectiveness" of the network's computerized library operations in meeting the expectations of the member library.

Expectations. The specific results of the network's computerized library operations anticipated by the administrative staff of the member library.

MECAP (Monitoring Effectiveness Consistency Awareness Program). This is an instrument designed to give an educational manager feedback concerning his effectiveness in the position he occupies. This program will be more fully described in Chapter III. Briefly, it provides for feedback on the following: (1) The expected and actual results of his management in terms of direct outcomes, indirect outcomes, personal qualities, skills, and managerial style; (2) The effectiveness of his management in terms of position effectiveness, person effectiveness, person-position fit, and awareness (Furtwengler, 1975).

OCLC (Ohio College Library Center). A computer network system, located in Columbus, that provides service to

member libraries across the country via leased telephone lines to cathode ray tube terminals in respective libraries, a time sharing network with on-line teletype-like terminals, and/or direct dialed telephone lines to teletype-like terminals. Bibliographic records and related information stored in the OCLC computer system provides member libraries with services such as: shared cataloging, printing of library cards, acting as a union catalog to assist libraries in locating wanted materials in other libraries, efficient record keeping, etc. Systems presently being developed will provide services for serial control, technical processing, remote catalog access and circulation control, and bibliographic information retrieval (OCLC, n.d.).

Para-Professional. This designation is used for library employees who do not have the professional degree relevant to their position (e.g. the M.L.S. degree) and perform duties basically clerical in nature.

Performance. This term covers all work output directly or indirectly affected by computer terminal operations.

Position effectiveness. In the MECAP inventory of managerial effectiveness, this is the extent to which the actual results (as seen by others) are the same as the expected results (as seen by others). The manager is seen by others as effective because the results they see are the results expected (Furtwengler, 1975).

In this study, the term will refer to the extent to which the actual performance of the network's computerized library operations (as seen by the persons on the respective library staff) are the same as the expected performances (as seen by these same persons on the respective library staff).

It was anticipated that one person, preferably the director, would represent the entire staff in the completing of inventory forms sent to each library.

Printed cards. A set of these cards, containing bibliographic information, are printed for each book cataloged by a library. The cards are printed by the network using information entered by a terminal from the respective library. They are then sent to the library to be placed in the card catalog that is used for general reference by library users (students, faculty, etc.).

Professional. Library employees possessing the relevant professional degree (e.g. the M.L.S. degree) are considered professional members of the staff.

SOLINET (Southeastern Library Network). SOLINET is a non-profit, independent, regional, computerized library network. SOLINET has a working arrangement with OCLC which provides access to the OCLC data base and to related computer services. The headquarters is located in Atlanta, Georgia and member libraries are located in Alabama, Florida, Georgia,

Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. Member libraries have access to those services described in the OCLC entry. The first terminals were installed at Emory University on January 2, 1975. SOLINET operations began at that time (SOLINET, 1975).

Terminal. The terminal may be of the special cathode ray tube type, or it may be of the teletype-like variety. Each member library has one or more terminals connected to the OCLC data base by the leased telephone line (for the cathode ray tube terminals), or at a time sharing network or direct dialed telephone lines (for the teletype-like terminals). The terminal is the library's medium for participating in the computerized services (OCLC, n.d.).

Limitations. Only the "position effectiveness" portion of MECAP was used. MECAP will be more fully described in Chapter III and it will be seen that this instrument was designed to evaluate "persons" in their administrative functions. Therefore, some of the parts of the original instrument cannot be used with inanimate objects such as computer terminals.

There is no provision for the elaboration of the expectations of the responding libraries. Actual numbers of positions eliminated, amount of time saved, etc. are irrelevant to this study. The purpose of this study is to determine

the fulfillment of expectations without regard to numerical expressions or other indications of the levels of those expectations.

CHAPTER II

SURVEY OF LITERATURE, DESCRIPTION OF PROGRAMS AND SUMMARY

Literature relating to the development of educational administration. The record of development actually had its beginning in the fifteenth century. In writing The Prince, Machiavelli questioned whether it is best for a leader to have a relationship based upon love (personal power) or fear (position power). He suggested a combination of the two (Hersey, 1972).

The dates used in this timetable are the publication dates of the respective reports.

1911. In 1911, Frederick Taylor's The Principles of Scientific Management was published. These principles were aimed primarily at factory production, but implied universal application. The principles contained thirteen steps. The two most important were: (1) distributing minute, specialized tasks, and (2) coordinating or ordering these numerous tasks (Owens, 1970).

1920s Era of Scientific Management. Taylor's principles were used as the basis for administrative concepts during this time.

1920. Mary Parker Follett moved ahead of her time when she suggested that managers structure the situation and then follow the "Law of the Situation." This was the first step toward the "situational theory" presently in vogue (Reddin, 1970).

1929. W. W. Charters and D. Waples studied the essential traits necessary for a person entering the educational profession. The ten ranking the highest were: good judgement, self-control, considerateness, enthusiasm, approachability, adaptability, breadth of interest, honesty, cooperation, and refinement. The University of Chicago Press published their book, The Commonwealth Teacher-Training Study, in 1929 (Hunt, 1958).

1930s Human Relations Era. This concept held that: (1) the output of a worker is determined more by his social capacity than by his physical capacity, (2) money is not the only reward for working, (3) highly specialized division of labor is not the best way to maximize efficiency, and (4) individual workers react to the organization as members of groups rather than as individuals (Owens, 1970).

1933. Elwood P. Cubberly and Walter C. Bells summarized the steps toward publicly supported schools, through taxation, in their book: An Introduction to the Study of Education (Hunt, 1958).

1938. Chester I. Barnard wrote The Functions of the Executive in 1938. He attempted to combine concern for tasks and relationships. Bennis categorized such persons, who combine these concerns, as "revisionists." Barnard was a successful business executive and used this as the basis for his writing (Hersey, 1972).

1939. The name of Elton Mayo is easily identified with the Western Electric Studies at Western Electric's Hawthorne plant in Chicago. The well-known "Hawthorne effect" takes its name from this study. However, the most important finding was that human variables are important in production. These studies are reported by Fritz J. Roethlisberger and William J. Dickson in Management and the Worker (Owens, 1970).

1940s Group Dynamics Era. This development looked to the characteristics of the individual, the characteristics of the group, and the cultural norms as determinants of group and individual behavior (Owens, 1970).

1943. In 1943, J. P. Mayer published Max Weber and German Politics. Weber was a German who held that bureaucracy is a theory of organization "especially suited to the needs of large and complex enterprises which performed services for large numbers of clients" (Owens, 1970).

1945. Herbert A. Simon published Adminstrative Behavior which Etzioni says "opened a whole new vista of admini-

strative theory." This text is still valuable in the study of administration. It was revised in 1957 (Owens, 1970).

1947. Leland P. Bradford, Kenneth D. Benne and Ronald Lippett developed the sensitivity or T-group training method at Bethel, Maine in 1947. The book T-Group Theory and Laboratory Method was written by Bradford, Benne, and Jack R. Gibbs and published in 1964 (Hersey, 1972).

1947. Kurt Lewin identified three phases in the change process. They included: unfreezing, changing, and refreezing. He reported in the article "Frontiers in Group Dynamics: Concept, Method and Reality in Social Science; Social Equilibria and Social Change" in Human Relations, June, 1947 (Hersey, 1972).

1948. Philip Selznick listed five needs of a social system. Briefly, they included: the security of the organization, stability of the lines of authority, stability of informal relations, continuity of policy, and homogeneity of outlook. His report is entitled "Foundations of the Theory of Organizations" and is found in the American Sociological Review, February, 1948 (Owens, 1970).

1948. Ralph M. Stogdill wrote a review of the literature which deals with the behavioral approach to leadership. His survey: "Personal Factors Associated With Leadership: A Survey of the Literature" is printed in the Journal of Psychology, 25, 1948 (Owens, 1970).

1949. Henri Fayol was a French theorist who had been a top-management executive. He focused on the manager rather than the worker, separated the processes of administration from the operations of the organization, and emphasized the common elements in all administration. He defined adminstration as comprising five elements: (1) to plan, (2) to organize, (3) to command, (4) to coordinate, and (5) to control (Owens, 1970).

1949. John K. Hemphill identified two group characteristics which he called "viscidity" (the cohesion that group members feel) and "hedonic tone" (feeling of satisfaction that group members receive from being members of the group). His study: Situational Factors in Leadership was published by Ohio State University in 1949.

Hemphill and Alvin E. Coons later developed the Leader Behavior Description Questionnaire. Information concerning the LBDQ can be found in "Development of the Leader Behavior Description Questionnaire" printed in Leader Behavior: Its Description and Measurement. This publication was edited by Stogdill and Coons and published by Ohio State University in 1957 (Owens, 1970).

1950s Management Styles Era. Attention was drawn to the concept of management styles by the work of the Bureau of Business Research at Ohio State University. They defined leadership as: "The behavior of an individual when he is

directing the activities of a group toward a goal attainment . . ." The works of Blake (Managerial Grid) and McGregor (Theory X - Theory Y) later contributed to the concern for style (Hersey, 1972).

1950. Two titles were published in 1950 that may relate more closely to the 40s era. In The Human Group, George C. Homans identified three elements in a social system. These included: activites, interactions, and sentiments. Homans contended that these elements were mutually dependent. David Reisman's The Lonely Crowd described the "other directed" individuals who are part of "the lonely crowd" (Hersey, 1972).

1950. Jesse Sears adapted Fayol's ideas to education by suggesting that administration was comprised of planning, organization, direction, coordination, and control. His book, The Nature of the Administrative Process was published in 1950 (Owens, 1970).

1953. David C. McClelland and his associates at Harvard have studied the urge to achieve. McClelland believes that the "achievment motive" can be isolated, assessed, and taught. McClelland, J. W. Atkinson, R. A. Clark, and E. L. Lowell authored The Achievement Motive in 1953 and The Achieving Society in 1961 (Hersey, 1972).

1954. Peter F. Drucker pointed out in his volume The Practice of Management that "managers (business leaders) are

the basic and scarcest resource of any business enterprise" (Hersey, 1972).

1954. Abraham H. Maslow authored Motivation and Personality in 1954. His "hierarchy of needs" includes, in ascending order, the following needs: physiological, safety, social, esteem, and self-actualization. Maslow's hierarchy of needs is used as the basis for a behavioral theory of motivation (Hersey, 1972).

1955. E. Paul Torrance reported that "poor suggestions by aircraft pilots were more readily accepted by a group of flight crew personnel than were good suggestions by gunners." This supported the contention that the probability that useful decision making information will reach the decision makers and be "believed, accepted, and respected depends to a great extent on the status that the holder of the information has with the group." This report, "Some Consequences of Power Differences on Decision Making in Permanent and Temporary Three-Man Groups," is found in Small Groups edited by A. Paul Hare et al. (Owens, 1970).

1956. Edward H. Litchfield sees the "administrative process" as a cycle that begins and ends with decision making: (1) decision making, (2) programming, (3) communicating, (4) controlling and (5) reappraising. The Administrative Science

Quarterly, June, 1956 contains his "Notes on a General Theory of Administration" (Owens, 1970).

1957. Chris Argyris is associated with the concept of organizational behavior which assumes "that (1) the individual has a personality and goals, (2) the organization has its own needs and goals, and (3) these two are incompatible in significant ways." His publication is entitled Personality and Organization (Owens, 1970).

1957. Alvin W. Gouldner described organizational style by distinguishing between "cosmopolitans" and "locals." Cosmopolitans are "those whose commitment is essentially to their profession" and locals are "those whose prime loyalty is to the organization." Gouldner's report, "Cosmopolitans and Locals: Toward an Analysis of Latent Social Roles," is in the Administrative Science Quarterly, December, 1957, and March, 1958 (Owens, 1970).

1957. The behavioral science movement received an impetus when the National Conference of Professors of Educational Administration sponsored a book to synthesize research and suggest program implications in educational administration. Roald F. Campbell and Russell T. Gregg were designated as coeditors. They emphasized the synthesizing and interpreting of research and experience dealing with administrative behavior. The resulting book was entitled Administrative Behavior in Education (Campbell, 1957).

1957. Robert Tannenbaum and Warren Schmidt described a range of leadership styles on a continuum going from authoritarian to democratic leader behavior. Their report, "How to Choose a Leadership Pattern" is in the Harvard Business Review, March-April, 1957 (Hersey, 1972).

1958. Jacob W. Getzels and Egon G. Guba developed a systems concept to use in analyzing factors influencing the behavior of individuals in organizations. The Getzels-Guba model has two dimensions: the "organizational (nomothetic) dimension" and the "personal (idiographic) dimension." Getzel's report, "Administration as a Social Process," is in the book Administrative Theory in Education edited by Andrew W. Halpin (Owens, 1970).

1958. William Schultz developed the "Fundamental Interpersonal Relations Orientation" (FIRO) to describe the three ways people relate to one another. The three are: power orientation (following the leader), personalness-counterpersonalness orientation (close personal relations and treating people differentially), and assertiveness orientation (tendency to express beliefs). His publications is entitled FIRO: A Three-Dimensional Theory of Interpersonal Behavior (Owens, 1970).

1959. The name of Daniel E. Griffiths is associated with the social systems concept which provides for two types of systems. An "open" system has an input-output relationship

with its environment and a "closed" system is independent of its environment. Griffiths authored Administrative Theory in 1959 and edited Behavioral Science and Educational Administration: The Sixty-Third Yearbook of the National Society for the Study of Education in 1964 (Owens, 1970).

1960s Era of Organizational Theory. The development of organizational concepts began with Taylor and Fayol's definition of the organization as an organizational chart, continued with Barnard defining it as a field of interpersonal relationships, was shortened by Halpin to simply interpersonal relationships, and finally described by Campbell as a group of people working together concertively toward a common goal (Shapiro, 1976).

1960. Douglas McGregor's "Theory X - Theory Y" has become a classic. Theory X "assumes that most people prefer to be directed, are not interested in assuming responsibilty, and want safety above all . . . people are motivated by money, fringe benefits, and the threat of punishment." Theory Y "assumes that people are not by nature, lazy and unreliable . . .man can be basically self-directed and creative at work if properly motivated . . . the properly motivated worker can achieve his own goals best by directing his own efforts toward accomplishing organizational goals." The Human Side of Enterprise was published in 1960 and Leadership and Motivation in 1966 (Hersey, 1972).

1960. Milton Rokeach developed the "Dogmatism Scale" to measure the "open mind-closed mind" characteristic. His publication is the Open and Closed Mind (Owens, 1970).

1960. Victor H. Vroom and Floyd C. Mann studied the "amount of interaction" in a job situation and found that workers in package and handling (where cooperation is needed) preferred employee-centered superiors, but truck drivers (who usually work alone) preferred task-oriented superiors. Their article, "Leader Authoritarianism and Employee Attitudes" is printed in Personnel Psychology, 12, 1960 (Hersey, 1972).

1961. Henry M. Bickell observed that phrases such as "democratic administration" and "shared decision making" are often used to hide the strength of administrative action. His Organizing New York State for Educational Change was published by the New York State Education Department (Owens, 1970).

1961. Amitai Etzioni, in describing his "compliance theory," contends that "the 'fit' between individual needs and organizational demands will depend to a considerable extent upon how the organization attracts participants and keeps them involved." A Comparative Analysis of Complex Organizations is the title of his publication (Owens, 1970).

1962. Norman Frederiksen developed a technique for studying administrative performance by having subjects react to items taken from a hypothetical in-basket. He had John K.

Hemphill outline a study using this technique with school administrators. Daniel E. Griffiths later joined Frederiksen and Hemphill in studying the administrative style of elementary school principals. The title of their book is Administrative Performance and Personality (Hemphill, 1962).

1962. Laurence Iannaccone described the informal organization in schools by defining "roles," and "primary group," and showing human interactions within these concepts. Griffiths' Organizing Schools for Effective Education contains this information (Owens, 1970).

1962. Robert Presthus provided a list of characteristics of bureaucracy in his book The Organizational Society (Owens, 1970).

1964. Robert R. Blake and associates developed "The Managerial Grid" which implies that the most desirable leader behavior is "team management" which means "maximum concern for production and people." This concept is contained in "Breakthrough in Organization Development" in Harvard Business Review, November-December, 1964 (Hersey, 1972).

1964. Matthew B. Miles defined an "open social system" as a bound collection in interdependent parts, devoted to the accomplishment of some goal, with the various parts maintained in a steady state in relation to each other and the environment by means of (1) the standard modes of operation,

and (2) feedback from the environment about the consequences of the system actions. Miles edited Innovation in Education (Owens, 1970).

1966. Warren G. Bennis wrote Changing Organizations in 1966 (Hersey, 1972).

1966. Andrew W. Halpin suggested a "continuum of organizational climate" which included: open, autonomous, controlled, familiar, paternal, and closed. He reported in "Change and Organizational Climate" in the Ontario Journal of Educational Research, Spring, 1966 (Owens, 1970).

1966. Frederick Herzberg wrote in Work and Nature of Man that "the human animal has two categories of needs." The first is the animal needs: safety, food, avoidance of pain, etc. The second is "man's compelling urge to realize his own potentiality by continuous psychological growth" (Owens, 1970).

1967. Rensis Likert in the Human Organization suggested that "the prevailing management styles of organization can be depicted on a continuum from System 1 through System 4." System 1 is a task-oriented management style and System 4 is a relationship-oriented style (Hersey, 1972).

1967. Fred E. Fielder, in A Theory of Leadership Effectiveness, presents a "Leadership Contingency Model." Three situational variables seem to indicate whether a given situation is favorable to a leader: (1) his personal relations

with the members of the group (leader-member relations); (2) the degree of structure in the task that the group has to perform (task structure); and (3) the power and authority that his position provides (position power) to him (Hersey, 1972).

1967. William J. Reddin was "the first to add an effectiveness dimension to the task and relationship dimensions of earlier models." The "tri-dimensional leader effectiveness model" is distinctive in that it does not indicate a single ideal leader behavior style that is appropriate in all situations. Reddin's article, "The 3-D Management Style Theory" is found in the Training and Development Journal, April, 1967 (Hersey, 1972).

1970. Reddin's book, Managerial Effectiveness, was published by McGraw-Hill in 1970. His concept of situational effectiveness is discussed in terms of the situational fit of a manager, in his position, as determined through a test of effectiveness. There are eight managerial styles listed including: executive, compromiser, benevolent autocrat, autocrat, developer, missionary, bureaucrat, and deserter. "The vital distinction between the more effective and less effective styles does not lie in managerial behavior expressed in terms of TO (Task Orientation) and RO (Relationship Orientation)." Any amounts of either or both do not guarantee effectiveness.

Effectiveness results from a style's appropriateness to the situation in which it is used. "Thus the dedicated basic style, when inappropriately used, is perceived as and called 'autocrat,' and when appropriately used, it is perceived as and called 'benevolent autocrat.'" The less effective and more effective versions of the basic styles are shown in the following table (Reddin, 1970).

When Used Inappropriately and Therefore Less Effectively	BASIC STYLE	When Used Appropriately and Therefore More Effectively
Compromiser ←	INTEGRATED →	Executive
Deserter ←	SEPARATED →	Bureaucrat
Autocrat ←	DEDICATED →	Benevolent autocrat
Missionary ←	RELATED →	Developer

MECAP/MEP represents the next logical step in educational administration. It was the development of this concept, unpublished at the time of this study, that provided the basic instrument necessary for the completion of the study. MECAP is described in the next section, under the more recent title of Monitoring Effectiveness Process (MEP).

Monitoring Effectiveness Process. The Monitoring Effectiveness Consistency Awareness Program (MECAP) has been referred to previously as the basis of the effectiveness monitoring portion of this study. It should be noted that the instrument and

procedures; developed by Dr. William O. Huckaby, Dr. Virginia Seghers, and Dr. Willis J. Furtwengler, has gone through several revisions. Some of the revisions have included changes in the title. The MECAP version was the specific version used in this study. The Monitoring Effectiveness Process (MEP) is a more recent version of the instrument and is more adequately descriptive of the current instrument and underlying concepts. Since the MECAP/MEP program is presently unpublished, the following description by one of the authors is included.

THE MONITORING EFFECTIVENESS PROCESS

During the summer of 1975, the basic format for the Monitoring Effectiveness Process was developed. The instruments and procedures used in this study have evolved through four revisions of those originally employed. These revisions have been based on the continued development of the theoretical framework discussed in the first two chapters and the suggestions of administrators, teachers, students and business men and women who have participated in the Monitoring Effectiveness Process. Additional improvements are expected to be made in future editions.

Implementation

The Monitoring Effectiveness Process is only assumed to be of value to voluntary participants. It is employed with groups of at least ten people and generally takes from two to four weeks for completing. The three phases of which it consists are discussed below.

Phase I

The participant is given a packet of materials which includes instructions on how to complete phase I. He is asked to write a self selected code number on each of

five copies of Personal Inventory I and one copy of the Personal Assessment. He is directed to focus on the specific position he holds or only one position if he holds two or more concurrently. He completes the Personal Assessment and returns it by mail in the envelope which is provided for that purpose.

He is directed to select five people who are familiar with his work, representative of the group on which he would like to focus and willing to respond candidly. It is assumed that since he has volunteered to participate and will receive confidential feedback from the five respondents he will choose people who meet these requirements. Once selected, he asks the cooperation of each in completing two questionnaires.

Each respondent is given one Personal Inventory I, one instruction sheet and one return envelope. The instructions direct the respondent to complete the Personal Inventory and return it by mail in the envelope provided.

Phase II

When all six questionnaires are received for a single code number, the objectives and goals from the Personal Assessment and the Personal Inventories are combined into a single list which becomes the third section of Personal Inventory II. Since these are individualized, the code number which corresponds to each set of goals and objectives is entered on the first page of each questionnaire. Complete sets of materials for the second phase are prepared and the appropriate code number is entered on the outside of large envelopes in which they are placed.

The participant then selects the envelope on which his code number is written and follows the instructions which are included. He gives one copy of Personal Inventory II to each of the same five individuals who completed the first inventory. Each respondent is directed to complete the inventory and return it by mail in the same manner as before.

Phase III

The respondent is asked to respond to the same thirty items on both inventories. However, on the first he is

asked to indicate the extent to which he expects certain personal qualities and behaviors in someone who occupies the position held by the participant. On the second inventory he is asked to indicate the extent to which he perceives the same personal qualities and behaviors in the participant. On Personal Inventory II the respondent is asked to indicate the extent to which he expects the person in the position held by the participant to achieve the goals and objectives that are listed and the extent to which he perceives them to be achieved by the participant. These are individually generated from the first inventory and the Personal Assessment.

Scores for each personal quality, behavior and outcome are calculated by subtracting the mean score for perceptions from the mean score for expectations. These are transferred to profiles which graphically depict for the participant the extent to which he is seen as fulfilling the expectations of the group represented by the five respondents who were chosen.

At a meeting for all participants, the theoretical base outlined in this paper is presented and illustrated. Participants select the profiles that are labeled with their code numbers and the results are discussed as a group. Follow-up activities occur when the need for such is expressed.

Anticipated Effects

It is assumed that the Monitoring Effectiveness Process will, first of all, increase the awareness of the participant. The feedback is assumed to be accurate because of the anonymity of the respondents; the representativeness of the five individuals selected is assumed on the basis of the instructions given participants and their expressed desire to gain knowledge, combined with observation of behavior, is assumed to result in an increased ability to interpret behavior in the future. Participants are assumed to gain awareness in phase three and develop increased ability to assess position effectiveness following their participation.

Position effectiveness is also assumed to be increased due to the participant's desire to increase his position effectiveness and the accurate feedback on which

he is able to base his actions. Overall position effectiveness can be increased by selecting only a sample of the personal qualities, behaviors and outcomes where large gaps exist and bringing about a few changes in either the expectations or perceptions for each. Former participants in the Monitoring Effectiveness Process have reported their attempts to focus on and address their efforts toward a few problem areas rather than on every item which did not have a perfect match between expectations and perceptions.

Finally, it is assumed that participants will be forced, by the activities involved on the third phase, to reflect on their own expectations and perceptions and attempt to increase their person effectiveness as a result. Further, since each participant is assumed to desire an increase in position effectiveness, this desire can be thought of as an expectation which, if fulfilled, would increase person effectiveness. Position effectiveness is, in a sense, one of the expected outcomes on which person effectiveness consists. If position effectiveness is perceived by the participant to be increased, then person effectiveness is increased simultaneously.

Each of these assumptions is reflected in one of the hypotheses which are operationally defined in chapter IV (Huckaby: unpublished doctoral dissertation, 1976).

The Computerized Library Network Questionnaire used in this study is adapted from the Situational Effectiveness Inventory (which is the title used for one specific version of the instrument portion of the program). This questionnaire is described in the "Survey Instrument" section of Chapter Three.

Library networking. There are three types of organizations concerned with the library networking. (1) Production networks are computer-based systems offering fixed computer

services to library customers. OCLC is an example of production networking. (2) Network development groups, such as the Council on Library Resources and the National Commission on Libraries and Information Science, which support library networking but neither operate a production network nor represent a specific user group. (3) The user-service network, such as SOLINET, is an organization of libraries formed to achieve services through the use of one or more production network. The primary purpose is to secure services for member libraries rather than to develop internal computer resources (SREB, 1977).

SOLINET, the user-service network that we are concerned with in this study, relies on the production network services of OCLC.

OCLC (Ohio College Library Center) was incorporated on July 6, 1967. Its purpose was "to establish, maintain and operate a computerized, regional library center to serve the academic libraries of Ohio (both state and private) and designed so as to become a part of any national communication" (Kilgour, 1969).

The Ohio College Association was responsible for founding OCLC. Activities began in 1951 with the formation of a "Special Committee to Consider an Ohio Cooperative Library." This committee considered bases for cooperation and sought unsuccessfully for grant support. Activities dwindled

until 1961 when the committee was revitalized as the "Librarians' Committee on Library Cooperation." The services of Wyman W. Parker of Wesleyan University were secured for three months. He conducted a survey entitled The Possibility of Extensive Library Cooperation in Ohio: A Survey which suggested the "establishment of a bibliographical center to facilitate interlibrary lending among Ohio academic libraries, and cooperative purchasing of microprint by the Center." The committee developed a concept of basing these activites on a union catalog and received proposals from two commercial firms for the development of the union catalog. Ralph Parker of the University of Missouri and Frederick G. Kilgour (the present director of OCLC) were called in to evaluate the proposals. They recommended, as a new approach, a "central computerized catalog having many functions, among them that of a union catalog." The committee accepted this report and recommended implementation. The Ohio Cooperative Library approved the report in 1966 and took action to "form a corporation, to employ a director, to choose a location for the center, and to arrange for receipt of funds." A year later the Center was fully organized and the director was embarking on the "design of a computerized regional library center" (Kilgour, 1969).

As of March 1976, OCLC was providing services to 670 libraries through 1,079 computer terminals throughout the

nation. Its data base includes the Library of Congress bibliographic data made available through LC's MARC tapes. One million new records are added each year, ten million items are cataloged for libraries, and sixty million cards are printed (Plotnik, 1976).

OCLC services presently provided to libraries include shared cataloging, printing of library cards, acting as a union catalog to assist libraries in locating wanted materials in other libraries, efficient record keeping, etc. Systems presently being developed will provide services for serial control, technical processing, remote catalog access and circulation control, and bibliographic information retrieval (OCLC, n.d.)

In a doctoral dissertation based on 1974 data, it was found that "OCLC was judged to have met, to the satisfaction of library directors, the principal goals of 80% of the libraries in which objectives were stated." Of libraries indicating this satisfaction, fifteen were "principally interested in providing quicker cataloging, ten were primarily interested in reducing cataloging costs, and seven in improving interlibrary loans", with the remainder expressing various other objectives. It was found that "the effects on all functions are stronger in the direction of improvement and enhancement of service--most notably through reductions in delay times--than in the direction of cost reductions" (Hewitt, 1976).

SOLINET (Southeastern Library Network) began with the endorsement by the Association of Southeastern Research Libraries (ASERL) of the establishment of "a computerized network similar to that of the Ohio College Library Center (OCLC)." This action was taken at the November 3, 1972 meeting of the ASERL and academic libraries in the southeastern states had until February 15, 1973 to issue a commitment to join in the initial formation of a network center. This decision was preceded by a four-month feasibility study conducted by John P. Kennedy, Data Processing Librarian at the Georgia Institute of Technology and assisted by Elroy W. Eckhardt, doctoral candidate at the Tulane University School of Business Administration (OCLC Replication in Southeastern States, 1972).

The feasibility study was a part of a year of planning initiated by Dr. John H. Gribbin, Library Director at Tulane University and Chairman of the ASERL. The year of planning was culminated by the first meeting, on March 9, 1973, of the eighty-four charter members of SOLINET. Also at this meeting, it was decided that the network should be organized by an agency of the Southeastern Regional Education Board (SREB). Other decisions voted on included the usual organizational matters of center location, membership fees, annual budget, etc. (Kennedy, 1973).

The first terminals were installed at Emory University on January 2, 1975. SOLINET service operations began formally at that time (SOLINET, 1975).

During the 1975-1976 fiscal year, SOLINET reports the following accomplishments:

> completion of installations and training for SOLINET charter members;
>
> installation of 75 new terminals;
>
> addition of 15 new members to the network;
>
> increased utilization of the system — not only in numbers of records used, but also in numbers of records input to the data base;
>
> fulfillment of training grant requirements for the Council on Library Resources (CLR), including the implementation of new training techniques using two new manuals;
>
> a growing realization of, and concern for, experienced users' needs, coupled with an increased ability to meet these needs;
>
> assembly of a technical staff;
>
> identification of objectives in the technical field, and adoption of a recommended evolutionary phased program to meet these objectives;
>
> improvement in fiscal position (SOLINET, 1976).

Decision making in the administration of the academic library. Owens suggests that decision making and administration may be synonymous and that decision making is at least "the" key function of administrators. He cites Litchfield's concept of "administration as a cycle of activities which begins and ends with decision making: (1) decision making, (2) programming, (3) communicating, (4) controlling, and (5) reappraising." Owens later defines decision making as "the search

for rational alternatives for action," and cites Campbell's similar list of "five steps in the administrative process: (1) decision making, (2) programming, (3) stimulating, (4) coordinating, and (5) appraising." Owens acknowledges the need for factual information as a part of the basis for this decision making process in his statement that "facts and values are inextricably intertwined in the choosing from alternative courses of action" (Owens, 1970).

The need for effective decision making, based on knowledge of technological data, in the academic library is reflected in the following statements.

> Many of the problems of libraries in the twentieth century have been caused by increasing numbers of students and faculty using the library services. There has also been an upward surge in the availability of books, periodicals and audio-visual materials. In addition, acquisition costs have spiraled due to domestic inflation and dollar devaluation in the foreign currency market. Finally, fluctuation in student enrollment has affected the planning processes of colleges and universities.

There are currently attempts to solve these problems, by "reassessing and reestablishing control measures to provide a more viable library service for users . . ." (Young, 1976).

In a 1970 doctoral dissertation relating to decision making in university libraries, Marchant recognized the need for technological data and for data relating to human factors.

> It would be extremely useful to librarians to know how its various products are translated into inputs as well as their relative importance so that they might better allocate their resources . . . the danger seen

> here is that decision making models based on hard data alone and ignoring psychological variables may result in emphasizing the wrong factors or failing to emphasize important ones (Marchant, 1972).

Hamburg lists the functions of a library as: providing physical facilities; providing access to documents within the library; providing access to documents in other libraries; promoting library use; planning; administration; and support. He attempted to design and develop an information system to assist in obtaining the best results from his planning and decision-making process.

> In this connection we have attempted to specify the types of data required to describe the functioning of the library, its outputs in terms of services to users, and the required inputs in terms of resources. From appropriate analyses of the measures of performance obtained, library administrators can decide on action required to increase the flow of benefits to users per unit cost or to decrease costs for a given level of benefits.

It is further suggested that data are useless unless they are "suitably organized to assist a manager in making decisions" (Hamburg, 1974).

This study was designed to provide librarians with technological data concerning the effectiveness of SOLINET in meeting expectations of member libraries. It is anticipated that this data will be useful in the administrative decision making process of the academic library.

Summary. In this chapter, we have traced the development of educational administration to its present standing represented

by an unpublished instrument (MEP) designed to assess administrative effectiveness.

Library networking literature began with the development of the Ohio College Library Center (OCLC) and concluded with quotations from the 1975-1976 annual report (their latest report, issued just prior to this writing) of the Southeastern Library Network, Inc. (SOLINET).

The relationship between decision making and the use of technological data in the administration of the academic library was investigated and found to be relevant.

Therefore, this study is using an adaption of the recently developed administrative instrument (MEP) to assess the operational effectiveness, in terms of member expectations, of one of the recently and rapidly developing library networks (SOLINET) in the anticipation of providing technological data that library administrators can use in their decision making processes.

The development of the revised instrument, a description of the survey population, and a discussion of the methods used in analyzing the data are included in the next chapter.

CHAPTER III

METHODS, MATERIALS, AND PROCEDURES

Survey instrument. The instrument used for this study was a survey questionnaire (Appendix C) entitled Computerized Library Network Effectiveness Questionnaire. This two-part questionnaire was adapted from the Situational Effectiveness Inventory which is a portion of the monitoring effectiveness program developed by Willis J. Furtwengler and William O. Huckaby.

The first part (Form Number One: Expected SOLINET Performance) attempted to assess the expectations of the member libraries. The second part (Form Number Two: Actual SOLINET Performance) attempted to gauge opinions of actual performance. The questions are identical on each of the forms. Responses were compiled from each form and then compared to determine the relationship between expectations and actual observations as perceived by users. This was done to assess the effectiveness of SOLINET in meeting expectations of member libraries.

A cover letter (Appendix A) was enclosed with each questionnaire and these were mailed to the directors of the respective libraries.

As indicated earlier, the Monitoring Effectiveness Process was designed to assess "persons" in their administrative activities. As summarized by Huckaby (1976): "when an individual assumes an administrative position or role in an organization, those characteristics which he brings to it (person dimension) interact with the factors associated with that position (position dimension)" to produce certain results which, in turn, affect the renewed input from both the person and position dimensions. "Administrative effectiveness . . . is an evaluation of the output phase of this system . . ."

The person dimension "consists of the characteristics that an individual possesses apart from and prior to his assumption of a position within an organization" (Huckaby, 1976).

The computerized library network operation as represented by SOLINET, has certain internal characteristics that are comparable to the person dimension. These qualities include such things as: speed in the processing of data, accuracy in the location and presentation of that data, efficiency in terms of time and costs, access to massive data, and certain mechanical traits such as presentation format (cathode ray tube, printer, etc.), the tendency to be technically inoperative at times, and response time that is variable in relation to work load.

The position dimension is described by Huckaby as follows.

> When an individual accepts a position in an organization, he assumes a 'role' in the functioning of the organization. Katz and Kahn have written: 'Roles describe specific forms of behavior associated with given tasks; they develop originally from task requirements. In their pure or organizational form, roles are standardized patterns of behavior required of all persons playing a part in a given functional relationship, regardless of personal wishes or interpersonal obligations irrelevant to the functional relationship! The position dimension consists of these factors related to the role that the individual occupies in the organization. He must deal with a specific set of people in an effort to achieve specific tasks" (Huckaby, 1976).

The network's computerized program must interact with a set of people which include: network persons (who provide the data, programs, and hardware and try to maintain proper functioning of these elements), library persons (who interact directly or indirectly through the terminal to secure network services), and library users (who ultimately gain or lose as a result of the network operations).

Each person within this "set of people" has personal characteristics and patterns of behavior. Each has expectations relating to the network services and is a part of the "position dimension" filled by the network operations.

The computerized library network operation has a "role" to fill within this setting. This role is determined by task requirements growing out of previous manual library operations, developing library needs, and new capabilities offered

by the network operations. In fulfilling the task requirements within a setting circumscribed by various persons, the computerized network operation is functioning within a specific position dimension.

Positions within organizations are "created for the purpose of achieving some predetermined outcomes. 'Outcomes' are work that is to be accomplished, tasks that are to be performed and goals or objectives that are to be achieved . . ." Perceived outcomes are those outcomes which observers perceived to result from the person/position interaction (Huckaby, 1976).

The Computerized Library Network Questionnaire used in this dissertation was designed to assess the "perceived outcomes" (as recorded by library directors) of the computerized library operations offered by SOLINET in the various southeastern academic libraries that have been members of the network since 1975. The "person dimension" is represented by the total network operation from the conception of the network plan through the delivery of services to the member library. The "position dimension" includes the total environment within which the network operates in the delivering of services to the libraries. The survey instrument has test items that assess respectively the person dimension and/or the position dimension categories, as defined by Huckaby, but this study is concerned primarily with outcomes. The purpose is

to compare expected outcomes with the actual performance (perceived outcomes) as perceived by library directors.

Validation. In the process of validating the survey questionnaire, a special instrument (Appendix C) was constructed in which each of the twenty-five respective items were rephrased into complete interrogative sentences. The set of questions were preceded by the list of four objectives suggested by SOLINET and each individual question was followed by: (1) provisions for the respondent to classify the question in relation to one of the four objectives, and (2) provisions for the respondent to indicate an opinion as to whether the question was valid or invalid in relation to the objective indicated previously. The respondents were given an opportunity to suggest additional objectives and/or additional questions.

The validation materials were sent, with a cover letter (Appendix B), to three library professionals. At least two of the three persons agreed to the validity of each of the survey questions and at least two agreed to each of the following placements of survey questions in relation to the four objectives.

Objective 1. Survey questions 1, 2, 3, 4, 5, 9, 10, 11, 13, and 15.
Objective 2. Survey questions 16, 17, 21, 23, and 24.
Objective 3. Survey questions 18, 19, 20, 22, and 25.
Objective 4. Survey questions 6, 7, 8, 12, and 14.

No additional objectives or questions were suggested by any of the respondents.

Reliability. The reliability of the survey instrument was determined by using the split halves technique.

In this calculation, the scores are split into two approximately equivalent halves. These two portions are then used as sources for the two sets of scores needed for reliability estimation. After calculating the correlation between scores on these two subtests, it is necessary to correct the subtest correlation to the full length value in order to obtain an estimate of the reliability of the total test instrument (Ebel, 1965).

The Split Half Reliability Calculation (Stanley's Procedure) was used as the basic formula. After calculating the reliability from the subtest score using this formula, the Spearman-Brown formula was used to correct to the reliability value for the total instrument. This calculation established a reliability estimate of .96 for the total Computerized Library Network Effectiveness Questionnaire as used in hypothesis one. The same calculations were used to determine the reliability of each of the subtests as used with hypotheses two through five. The reliability estimates for each of the subtests were: .92 for hypothesis two (cataloging books quickly and efficiently); .94 for hypothesis three (locating books

easily in other libraries); .97 for hypothesis four (obtaining fast, accurate information for uncertain references); and .95 for hypothesis five (lowering the rate at which library expenses are increasing).

Survey Population. The intended population was a list of one-hundred-four academic libraries included in SOLINET's membership list printed in their 1974-1975 annual report. This list was intentionally used in an attempt to survey SOLINET members with the maximum length of experience (the first terminal was installed in January 1975).

The membership list included, in addition to those libraries with full membership, eleven libraries who were "not participating in shared cataloging module." Some of the surveys sent to these eleven libraries were returned with statements indicating that they were not SOLINET members. Therefore, our total survey population was something less than the one-hundred-four libraries anticipated.

The numerical distribution of the original 104 libraries within the southeastern states was as follows: Alabama (7), Florida (24), Georgia (21), Kentucky (8), Louisiana (7), Mississippi (1), North Carolina (17), South Carolina (5), Tennessee (10), and Virginia (4).

Methods of analyzing data. The first null hypothesis is: there is no significant difference between the general expected

performance of the SOLINET computerized library operations and the actual performance.

The second null hypothesis is: there is no significant difference between the expected performance of SOLINET, in the speed and efficiency of cataloging books, and the actual performance.

The third null hypothesis is: there is no significant difference between the expected performance of SOLINET, in the locating of books in other libraries, and the actual performance.

The fourth null hypothesis is: there is no significant difference between the expected performance of SOLINET, in the obtaining of fast, accurate information for uncertain references, and the actual performance.

The fifth null hypothesis is: there is no significant difference between the expected performance of SOLINET, in the lowering of the rate at which library expenses are increasing, and the actual performance.

A one-way analysis of variance formula was used to determine the mathematical significance of the relationship (F ratio at the .05 level) between scores from the expected performance form and scores from the actual performance form.

In addition to the one-way analysis of variance test, the relationship between the expected performance scores and

the actual performance scores were examined numerically and graphically using MECAP.

CHAPTER IV

DATA ANALYSIS

One-way analysis of variance. The study was designed with one general hypothesis to assess the fulfillment of expectations of the total network operations, as experienced within the individual library, and four additional hypotheses to assess specific aspects of the operations.

The survey instrument, the Computerized Library Network Effectiveness Questionnaire, was sent to 104 academic libraries listed in SOLINET's 1974-1975 annual report. Sixty-seven responses were returned. Ten of these were unusable because libraries listed had never become functioning members of the network, questionnaires were not appropriately or adequately completed, etc. This left fifty-seven completed questionnaires. The data used was taken from those fifty-seven responses.

Hypothesis one. There is no significant difference between the general expected performance of the SOLINET computerized library operations and the actual performance.

A one-way analysis of variance formula was used, with this and each of the following hypotheses, to determine the mathematical significance, at the .05 level, of the relationship between scores from the expected performance form and scores from the actual performance form.

The one-way analysis of variance computation concludes with a numerical value stated as an F ratio. An F ratio table is then consulted to determine the significance of this numerical value. If the number derived from the computation is larger that the number specified in the table, then the null hypothesis is rejected. If the number derived is less than the number specified in the table, then the null hypothesis is accepted.

The F ratio for the first null hypothesis was 6.71 with a rejection level (using an F ratio table) of 4.08. Therefore, this null hypothesis is rejected. In other words, a significant difference was indicated, between the expected general performance and actual performance at the .05 level of significance.

Hypothesis two. There is no significant difference between the expected performance of SOLINET, in the speed and efficiency of cataloging books, and the actual performance.

The F ratio for the second null hypothesis was 4.21 with a rejection level of 4.38. Therefore, this hypothesis is accepted indicating that no significant difference was found between the expected and actual performance in the speed and efficiency of cataloging books.

Hypothesis three. There is no significant difference between the expected performance of SOLINET, in the locating of books in other libraries, and the actual performance.

The F ratio for the third null hypothesis was 1.06 with a rejection level of 5.12. The hypothesis is accepted indicating that no significant difference was found between the expected and actual performances in the locating of books in other libraries.

Hypothesis four. There is no significant difference between the expected performance of SOLINET, in the obtaining of fast, accurate information for uncertain references, and the actual performance.

The F ratio for the fourth null hypothesis was 2.38 with a rejection level of 5.12. The hypothesis is accepted indicating that no significant difference was found between the expected and actual performance in the obtaining of fast, accurate information for uncertain references.

Hypothesis five. There is no significant difference between the expected performance of SOLINET, in the lowering of the rate at which library expenses are increasing, and the actual performance.

The F ratio for the fifth null hypothesis was 3.06 with a rejection level of 5.12. The hypothesis is accepted indicating that no significant difference was found between

the expected and actual performances in the lowering of the rate at which library expenses are increasing.

Summary. The difference between the expected performance and the actual performance of the general network operation (first null hypothesis) was found to be statistically significant using a one-way analysis of variance test. The general performance was assessed by comparing responses from all twenty-five items on Form Number One with responses from all twenty-five items on Form Number Two.

The difference between expected performance and actual performance was not statistically significant for any of the sub-hypotheses: speed and efficiency of cataloging books (items 1, 2, 3, 4, 5, 9, 10, 11, 13, and 15); locating of books in other libraries (items 16, 17, 21, 23, and 24); obtaining of fast, accurate information for uncertain references (items 18, 19, 20, 22, and 25); and the lowering of the rate at which library expenses are increasing (items 6, 7, 8, 12, and 14).

MECAP/MEP analysis. As stated earlier, it has been the intention in the design of this study to use two forms of data analysis. The preceding pages contained as assessment using the traditional one-way analysis of variance method. In this section, the more recently developed MECAP/MEP format will be used to give a graphic portrayal of the data collected.

The following explanation introduced the concept of MECAP's graphic model of effectiveness. It must be remembered that MECAP was designed for "persons" in management positions and contains elements in the basic design that are not applicable to this study (e.g. results as seen by the person).

> The circle in figure 1 represents the interaction of the manager with the environemmt of his position. The horizontal arrows represent the actual results as viewed by the manager (right) and those who have an interest in his position (left). The vertical arrows represent the results which are expected by the manager (bottom) and others (top) (Furtwengler, 1975).

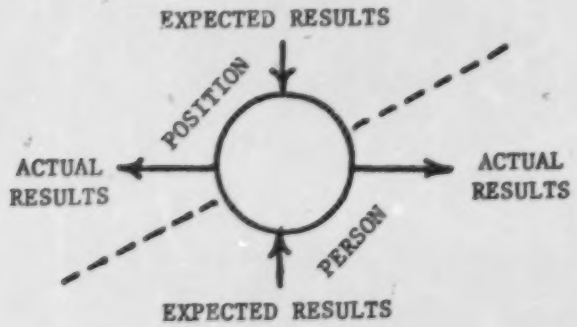

Figure 1. Expected and actual results of the interaction of the manager with position environment (Furtwengler, 1975).

The top left quarter of the circle in figure 1 is used to illustrate effectiveness areas in figure 2. The Position Effectiveness of a manger is the extent to which actual "results (as seen by others) are the same as expected results (as seen by others). The manager is seen by others as being effective because the results they see are the results they expect" (Furtwengler, 1975).

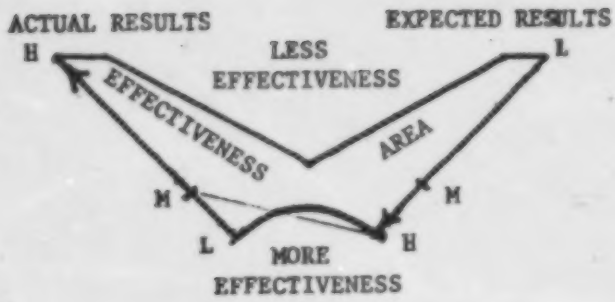

Figure 2. Position effectiveness profile for openness (Furtwengler, 1975).

The area inside the enclosed pattern (figure 2) represents effectiveness. A high degree of openness is expected by others and they see the manager possessing only moderate openness. Therefore, the manager is seen as somewhat less effective in terms of openness. When this graph is used to portray the data investigated in this study, the letters (L=Low, M=Moderate, and H=High) represent the actual and expected levels of actual performance by the computerized library network. If the data collected in relation to a particular hypothesis reflected a high level of expected performance and a moderate level of actual performance, as in figure 2, the network would be seen as somewhat less effective in the area of performance being investigated in that hypothesis.

These graphic patterns are used here only to present pictorial approximations of a concept of difference.

Hypothesis one. There is no significant difference between the general expected performance of the SOLINET computerized library operations and the actual performance.

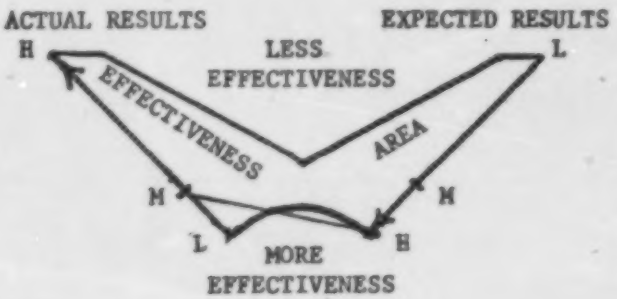

Figure 3. Hypothesis one.

Note that the connecting line, for hypothesis one, falls slightly outside of the effectiveness area. This reflects the indication that a statistically significant difference between expected and actual scores was found when using the one-way analysis of variance.

Hypothesis two. There is no significant difference between the expected performance of SOLINET, in the speed and efficiency of cataloging books, and the actual performance.

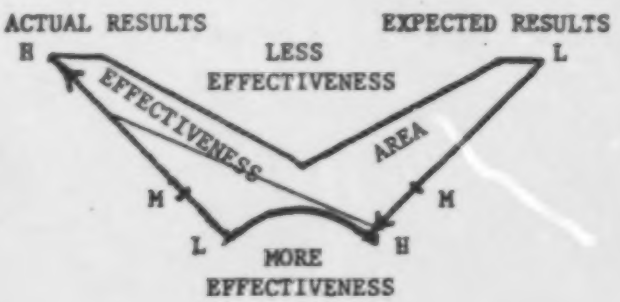

Figure 4. Hypothesis two.

The connecting line, between expected performance and actual performance, falls clearly within the effectiveness area.

Hypothesis three. There is no significant difference between the expected performance of SOLINET, in the locating of books in other libraries, and the actual performance.

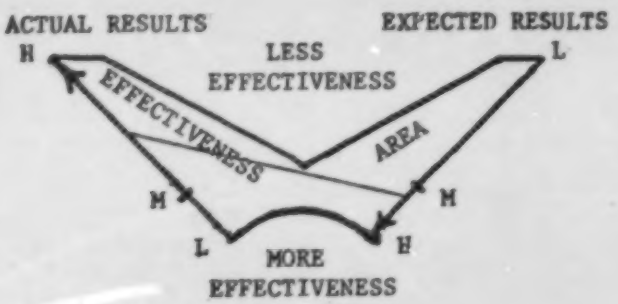

Figure 5. Hypothesis three.

The connecting line, again, falls within the effectiveness area.

Hypothesis four. There is no significant difference between the expected performance of SOLINET, in the obtaining of fast, accurate information for uncertain references, and the actual performance.

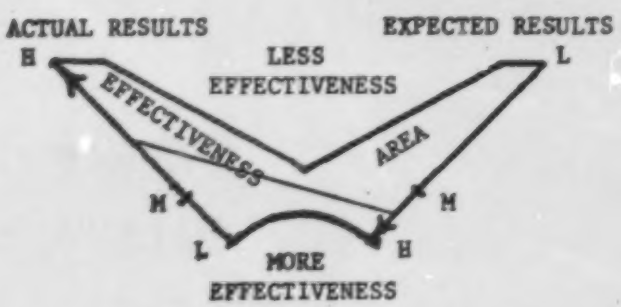

Figure 6. Hypothesis four.

The connecting line, for hypothesis four, is centrally located within the effectiveness area.

Hypothesis five. There is no significant difference between the expected performance of SOLINET, on the lowering of the rate at which library expenses are increasing, and the actual performance.

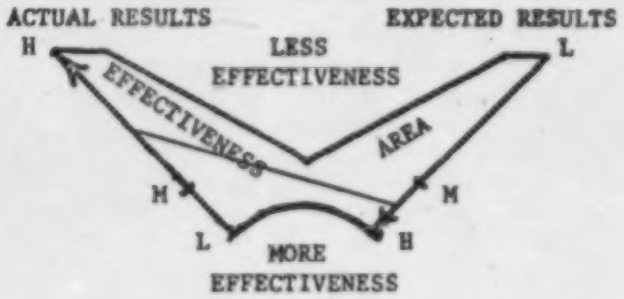

Figure 7. Hypothesis five.

As in the preceding graphs, the connecting line is completely within the effectiveness area.

Summary. The MECAP/MEP graphic models show the actual performance of SOLINET operations, as perceived by member libraires, in relation to expected performance to be well within effectiveness areas when the performance is divided into specific segments. This is not true for hypothesis one where the one-way analysis of variance reflected a statistically significant difference.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary. This dissertation was designed to study the extent to which the actual performance, as perceived by users, of computerized library network operations are consistent with the performances expected by the respective academic libraries. The Southeastern Library Network, Inc. (SOLINET) was used as the specific area of investigation within the field of library networking.

The survey instrument was sent to one-hundred-four academic libraries listed in the 1974-1975 annual report of SOLINET. This instrument was adapted from the "position effectiveness" portion of MECAP and was designed specifically for this study.

In the "statement of the problem" on page two, there were three specific goals stated for the study. Those goals and the relevant findings are as follows.

1. Evaluate the technological system, as it now exists, in terms of the outputs of the system and their implications for library directors.

Various possibilities were indicated in the "implications for administration" section beginning on page five. The data collected is not sufficient to permit comments on all

of the possibilities listed, but it does seem to give some support to each of the following statements. (1) Implications for technical processes: bibliographic information needed for the cataloging and classification of books is secured faster; printed cards are ready for filing in the card catalog faster; the number of operational steps is reduced; there is a lower number of books requiring local cataloging and classification; new books get to the shelves faster; and the over-all efficiency of the technical processes department is improved. (2) Implications for personnel: a lower number of professional librarians is needed for performing manual tasks; and the morale of the staff should be increased due to the quick and efficient processing of work loads. It appears that the technical processes operations can be performed by a lower number of total personnel and that a larger percentage of these persons can be para-professionals. This suggests a lower demand for librarians trained in technical processes and a retraining of present librarians into other skill areas. (3) Implications for service to library users: more reference questions should be answered; interlibrary loans are increased; and books that are more current are available due to shortened processing time.

2. Evaluate the technological system, as it now exists, in terms of the outputs of the system and their implications for network administrators.

One of the largest discrepancies between expected and actual mean scores on any particular test item was found on item four concerning "down time due to on-line problems." The mean expected score was 4.54 and the mean actual score was 3.91. If these scores are plotted on a MECAP/MEP graph, at least part of the connecting line is outside of the effectiveness area (see figure 8). As indicated earlier, the graphic pattern is only an approximation of the actual difference.

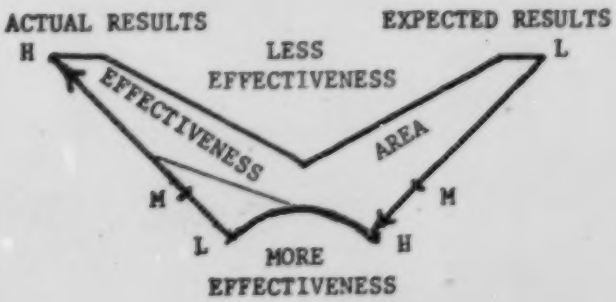

Figure 8. Down time due to on-line problems

Network administrators may want to consider the statistically significant difference between the expected and actual performances of the "general" operation. When this is compared to the satisfactory effectiveness of the various segments of the operation, it may mean that network members and potential members need different or additional information descriptive of the total program. This may also reflect a psychological reaction to a major change.

3. Design and develop an instrument (or method) that can be used for the evaluation of similar networks.

It is hoped that the instrument presented is adequate for this purpose; it is copyrighted and permission of the author is required for usage.

Conclusions. There were no statistically significant differences found between actual performance, as perceived by users, and the expected performance of the computerized library network operations offered by SOLINET within the specific areas of: cataloging books quickly and efficiently; locating books easily in other libraries; obtaining fast, accurate information for uncertain references; and lowering the rate at which library expenses are increasing.

There was a statistically significant difference found (using the one-way analysis of variance) between actual performance and the expected performance of the general operations of the network. This apparent contradiction is interesting in terms of concepts held by network members, but it is not statistically impossible or inconsistent. This difference did appear to be out of the effectiveness area when plotted on a MECAP/MEP graph.

Recommendations. The following recommendations are offered to each of the groups as specified. 1. Potential network members: (a) The computerized library network program does

function effectively (particularly the program offered by SOLINET), and (b) in order to secure relatively realistic expectations contact other libraries of similar size for operational data. 2. Network members: Data should be carefully collected locally for use in assigning resources (personnel, finances, space, etc.) in order to realize maximum potential from network operations. 3. Library networks: (a) As additional information becomes available concerning local operations, from network libraries; this information should be disseminated to network members and potential members, and (b) response time should be reduced as technically possible (the invesitgator is aware that this problem is recognized and is being addressed by network administrators). 4. Researchers: (a) Parallel studies within other networks and/or network comparisons would add to the available network data, and (b) assessment of actual levels of expectations (numerical information on cataloging time, personnel needed, etc.) should be compiled in relation to library size.

Finis. The actual performances of library network operations (as represented by SOLINET) were found to be effective in meeting the expectations of network members when the operations were divided into operational segments. The actual performance was less effective in meeting the "general" expectations.

Appendix A

Trevecca Nazarene College

Nashville, Tennessee 37210

Dear

I am collecting information for a dissertation that I am writing for the Ph.D. degree at George Peabody College for Teachers.

I would like to ask you to complete the enclosed survey questionnaire concerning SOLINET performance.

As the director of a library that recently became a member of SOLINET, I am interested in the degree to which SOLINET is able to fulfill the expectations of its member libraries. I am not trying to determine the exact nature of the expectations - my interest is in the degree of fulfillment of the expectations.

You will notice that there are two parts to the questionnaire. Please answer the questions in Form Number One (pp. 1-4) in terms of the SOLINET performance as you think it should be. Please answer the questions in Form Number Two (pp. 5-8) in terms of the SOLINET performance as you think it actually is based upon your experience in your library.

This survey questionnaire is being sent to the academic libraries that have been members of SOLINET since 1975. Due to the limited number of libraries included in the survey, it is very important for each library to respond. Please complete the questionnaire and return it in the stamped envelope enclosed.

Thank you for your assistance.

Sincerely,

Johnny J. Wheelbarger, Ed.D.
Director of Learning Resources

JJW/pe

Appendix B

Trevecca Nazarene College

Nashville, Tennessee 37210

Dear

I am collecting information for a dissertation that I am writing for the Ph.D. degree at Peabody.

I would like to have your assistance in determining the validity of the survey instrument that I will be using.

As the director of a library that recently became a member of SOLINET, I am interested in the degree to which SOLINET is able to fulfill the expectations of its member libraries. I am not trying to determine the exact nature of the expectations - my interest is in the degree of fulfillment of the expectations.

Surveys will be sent to libraries who have been members of SOLINET since 1975. Each library will be given two copies of the same survey form, on the first they will be asked to indicate their expectations and on the second the actual SOLINET performance as seen in their library.

Thank you for your assistance.

Sincerely,

Johnny J. Wheelbarger, Ed.D.
Director of Learning Resources

JJW/pe

Appendix C

VALIDATION INSTRUMENT

INSTRUCTIONS

SOLINET literature indicates four general objectives for their computerized library network operations. They will attempt to serve users by:

1. "Cataloging books quickly and efficiently...
2. "Locating books easily in other libraries...
3. "Obtaining fast, accurate information for uncertain references...
4. "Lowering the rate at which library expenses are increasing. After the initial start-up charges, a library of ten thousand acquisitions annually may show appreciable reductions" (SOLINET, n.d.).

Please refer to these four objectives (by number) as you read and respond to each of the following questions.

1. Is the speed of securing the bibliographic, cataloging, and classification information needed in processing a book faster with SOLINET than with manual procedures?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

2. Is the performance of SOLINET satisfactorily accurate for cataloging purposes in terms of the percentage of titles that are found in the data bank?

a) This questions attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____. invalid_____ in relation to the objective checked in a).

3. Is the performance of SOLINET satisfactorily accurate in terms of infrequency of duplicate titles, identical LC numbers, and similar cataloging problems?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

4. Is SOLINET dependable for cataloging purposes in terms of

the amount of down time due to on-line problems?

a) This question attempts to obtain information relating to objective (check one),
1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

5. Is SOLINET dependable for cataloging purposes in terms of the amount of down time due to local equipment malfunctions?

a) This question attempts to obtain information relating to objective (check one),
1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

6. Is the terminal easy and economical to operate when cataloging books?

a) This question attempts to obtain information relating to objective (check one)

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

7. In terms of cost-effectiveness, is the difference in the cost of cards enough to be a significant factor?

   a) This question attempts to obtain information relating to objective (check one),

   1_____, 2_____, 3_____, 4_____.

   b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

8. In terms of cost-effectiveness, is the savings in professional/para-professional labor enough to pay for network costs?

   a) This question attempts to obtain information relating to objective (check one),

   1_____, 2_____, 3_____, 4_____.

   b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

9. Is the added efficiency in processing books a more important factor than costs?

   a) This question attempts to obtain information relating to objective (check one),

   1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

10. Does the network system produce the printed cards in a satisfactory delivery time?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

11. Are the printed cards clear and do they have satisfactory readability?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

12. Does SOLINET reduce operating costs by eliminating the need for a significant number of professional/para-professional workers?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

13. Does SOLINET reduce the total process time needed per book?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

14. Does SOLINET reduce processing costs due to the elimination of a number of steps used in the processing procedures?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

15. Does the use of SOLINET improve staff morale through the quick and efficient cataloging of books?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

16. Does SOLINET increase total circulation through the use of increased interlibrary information?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

17. Does the use of SOLINET increase the number of interlibrary loans?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

18. Does the added reference information provided by SOLINET decrease the number of failures to produce materials requested by patrons?

a) This question attempts to obtain information relating to objective (check one),
1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

19. Does the use of SOLINET increase the percentage of reference questions answered successfully?

a) This question attempts to obtain information relating to objective (check one),
1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

20. Does SOLINET membership increase the amount of cooperation with other libraries through shared resources based on in-

creased knowledge of other library holdings?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

21. Does SOLINET provide more adequate data, from other libraries, for management of reference questions?

a) This question attempts to obtain information relating to objective (check one),

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

22. Does SOLINET make easier the locating of highly specialized titles, needed for reference questions, in other libraries?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

23. Does SOLINET make easier the locating of reference materials in other libraries?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

24. Does SOLINET make easier the locating of titles in microform formats in other libraries?

a) This question attempts to obtain information relating to objective (check one),

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____ in relation to the objective checked in a).

25. Is the reference information provided by SOLINET satisfactorily accurate?

a) This question attempts to obtain information relating to objective (check one).

1_____, 2_____, 3_____, 4_____.

b) This question is (check one) valid_____, invalid_____

in relation to the objective checked in a).

Are there additional objectives that you think this study should include? If so, please list them.

_____

_____

_____

_____

_____

Are there additional questions that you think should be asked in relation to the objectives listed? If so, please list them.

_____

_____

_____

_____

_____

Appendix D

COMPUTERIZED LIBRARY NETWORK EFFECTIVENESS QUESTIONNAIRE

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Form Number One:

EXPECTED SOLINET PERFORMANCE

Instructions: Circle the letter that most accurately reflects the SOLINET performance as you think it should be.

Example: I think the computerized library operations provided by SOLONET should be:

1) Faster than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book	A	B	C	D	E	Slower than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book

Circle (A) if you think it should be definitely faster, (B) if slightly faster, (C) if neither faster nor slower, (D) if slightly slower, (E) if definitely slower.

The computerized library operation provided by SOLINET IS:

1) Faster than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book	A B C D E	Slower than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book
2) Inaccurate, unsatisfactory for cataloging purposes in terms of percentage of titles that are found in the data bank	A B C D E	Accurate, satisfactory for cataloging purposes in terms of percentage of titles that are found in the data bank
3) Accurate, duplicate titles with identical LC numbers and similar cataloging errors are infrequent	A B C D E	Inaccurate, duplicate titles with identical LC numbers and similar cataloging errors are frequent
4) Dependable for cataloging purposes, down time due to on-line problems is low	A B C D E	Undependable for cataloging purposes, down time due to on-line problems is high
5) Dependable for cataloging purposes, down time due to local equipment malfunction is low	A B C D E	Undependable for cataloging purposes, down time due to local equipment malfunction is high
6) Difficult to operate terminal when cataloging books	A B C D E	Easy to operate terminal when cataloging books
7) Cost-effective, the difference in cost of cards is enough to be a significant factor	A B C D E	Not cost-effective, the difference in cost of cards is not enough to be a significant factor
8) Cost-effective, the savings in professional/para-professional labor is enough to pay for network costs	A B C D E	Not cost-effective, the savings in professional/para-professional labor is not enough to pay for network costs
9) Inefficient, the added efficiency in processing books is a less important factor than costs	A B C D E	Efficient, the added efficiency in processing books is a more important factor than costs

The computerized library operation provided by SOLINET DOES:

10) Produce printed cards in satisfactory delivery time	A B C D E	Produce printed cards in unsatisfactory delivery time

11) Produce printed cards that are clear and have satisfactory readability	A B C D E	Produce printed cards that are not clear and have unsatisfactory readability
12) Reduce operating costs by eliminating the need for a significant number of professional/para-professional workers	A B C D E	Increase operating costs by increasing the need for a significant number of professional/para-professional workers
13) Increase processing costs due to the total process time needed per book	A B C D E	Reduce processing costs due to the total process time needed per book
14) Increase processing costs due to the increase in the number of steps in the processing procedures	A B C D E	Reduce processing costs due to the elimination of a number of steps in the processing procedures
15) Improve staff morale through the quick and efficient cataloging of books	A B C D E	Destroy staff morale through the slow and inefficient cataloging of books
16) Decrease total circulation through the use of decreased reference information	A B C D E	Increase total circualtion through the use of increased reference information
17) Increase the number of interlibrary loans	A B C D E	Decrease the number of interlibrary loans
18) Decrease the number of failures to produce materials requested due to the added reference information available	A B C D E	Increase the number of failures to produce materials requested due to less reference information available
19) Increase the percentage of references questions answered successfully	A B C D E	Decrease the percentage of references questions answered successfully
20) Increase cooperation with other libraries through shared resources based on increased knowledge of other library holdings	A B C D E	Decrease cooperation with other libraries through shared resources because of less knowledge of other library holdings
21) Provide more adequate data for management of reference questions	A B C D E	Provide less adequate data for management of reference quesitons
22) Make more difficult the locating of highly specialized titles in other libraries	A B C D E	Make easier the locating of highly specialized titles in other libraries

23) Make more difficult the locating of reference materials in other libraries	A B C D E	Make easier the locating of reference materials in other libraries
24) Make easier the locating of materials in microform formats in other libraries	A B C D E	Make more difficult the locating of materials in microform formats in other libraries
25) Provide reference information that is unsatisfactory in accuracy	A B C D E	Provide reference information that is satisfactorily accurate

This form is adapted from the Situational Effectiveness Inventory by Willis J. Furtwengler and William O. Huckaby, 1976.

COMPUTERIZED LIBRARY NETWORK EFFECTIVENESS
QUESTIONNAIRE

Copyright 1977

Form Number Two:

ACTUAL SOLINET PERFORMANCE

Instructions: Circle the letter that most accurately reflects the SOLINET performance as you think it is actually based on your experience in your library.

Example: I think the computerized library operation provided by SOLINET actually is:

1) Faster than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book	A	B	C	D	E	Slower than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book

Circle (A) if you think it should be definitely faster, (B) if slightly faster, (C) if neither faster nor slower, (D) if slightly slower, (E) if definitely slower.

The computerized library operation provided by SOLINET IS:

1) Faster than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book	A B C D E	Slower than manual procedures in securing bibliographic, cataloging, and classification information needed in processing a book
2) Inaccurate, unsatisfactory for cataloging purposes in terms of percentage of titles that are found in the data bank	A B C D E	Accurate, satisfactory for cataloging purposes in terms of percentage of titles that are found in the data bank
3) Accurate, duplicate titles with identical LC numbers and similar cataloging errors are infrequent	A B C D E	Inaccurate, duplicate titles with identical LC numbers and similar cataloging errors are frequent
4) Dependable for cataloging purposes, down time due to on-line problems is low	A B C D E	Undependable for cataloging purposes, down time due to on-line problems is high
5) Dependable for cataloging purposes, down time due to local equipment malfunction is low	A B C D E	Undependable for cataloging purposes, down time due to local equipment malfunction is high
6) Difficult to operate terminal when cataloging books	A B C D E	Easy to operate terminal when cataloging books
7) Cost-effective, the difference in cost of cards is enough to be a significant factor	A B C D E	Not cost-effective, the difference in cost of cards is not enough to be a significant factor
8) Cost-effective, the savings in professional/para-professional labor is enough to pay for network costs	A B C D E	Not cost-effective, the savings in professional/para-professional labor is not enough to pay for network costs
9) Inefficient, the added efficiency in processing books is a less important factor than costs	A B C D E	Efficient, the added efficiency in processing books is a more important factor than costs

The computerized library operation provided by SOLINET DOES:

10) Produce printed cards in satisfactory delivery time	A B C D E	Produce printed cards in unsatisfactory delivery time

11) Produce printed cards that are clear and have satisfactory readability	A B C D E	Produce printed cards that are not clear and have unsatisfactory readability
12) Reduce operating costs by eliminating the need for a significant number of professional/para-professional workers	A B C D E	Increase operating costs by increasing the need for a significant number of professional/para-professional workers
13) Increase processing costs due to the total process time needed per book	A B C D E	Reduce processing costs due to the total process time needed per book
14) Increase processing costs due to the increase in the number of steps in the processing procedures	A B C D E	Reduce processing costs due to the elimination of a number of steps in the processing procedures
15) Improve staff morale through the quick and efficient cataloging of books	A B C D E	Destroy staff morale through the slow and inefficient cataloging of books
16) Decrease total circulation through the use of decreased reference information	A B C D E	Increase total circualtion through the use of increased reference information
17) Increase the number of interlibrary loans	A B C D E	Decrease the number of interlibrary loans
18) Decrease the number of failures to produce materials requested due to the added reference information available	A B C D E	Increase the number of failures to produce materials requested due to less reference information available
19) Increase the percentage of references questions answered successfully	A B C D E	Decrease the percentage of references questions answered successfully
20) Increase cooperation with other libraries through shared resources based on increased knowledge of other library holdings	A B C D E	Decrease cooperation with other libraries through shared resources because of less knowledge of other library holdings
21) Provide more adequate data for management of reference questions	A B C D E	Provide less adequate data for management of reference quesitons
22) Make more difficult the locating of highly specialized titles in other libraries	A B C D E	Make easier the locating of highly specialized titles in other libraries

23) Make more difficult the locating of reference materials in other libraries	A B C D E	Make easier the locating of reference materials in other libraries
24) Make easier the locating of materials in microform formats in other libraries	A B C D E	Make more difficult the locating of materials in microform formats in other libraries
25) Provide reference information that is unsatisfactory in accuracy	A B C D E	Provide reference information that is satisfactorily accurate

PLEASE COMPLETE THE FOLLOWING:

1. Name of college or university (optional) _____

   _____

2. Name of person completing this form (optional) _____

   _____

3. Total number of volumes in your collection (include all libraries served by the SOLINET facilities) _____

4. Total number of students (include all campus locations served by the SOLINET facilities) _____

5. Total number of volumes processed per year (include all libraries served by the SOLINET facilities) _____

Note. The information requested in 1-5 above does not relate directly to the central purpose of the study, but may be used for demographic purposes (e.g. relationship between library size and questionnaire answers).

This form is adapted from the Situational Effectiveness Inventory by Willis J. Furtwengler and William O. Huckaby, 1976.

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